

WE CLAIM:

1 1. A method of autoclaving a container in which a
2 shiftable plunger defines a compartment filled with a fluid, the
3 method comprising the step of:

4 confining the container in a pressurizable chamber;
5 heating the container in the chamber and thereby
6 changing a pressure in the compartment of the container;

7 monitoring the pressure in the compartment of the
8 container and generating an output corresponding thereto; and

9 varying pressure in the chamber around the container so
10 as to be generally equal to the monitored pressure in the
11 compartment of the container.

1 2. The autoclaving method defined in claim 1 wherein
2 the pressure is monitored by monitoring movement of the plunger
3 as the container is heated.

1 3. The autoclaving method defined in claim 2 wherein
2 the pressure is monitored by a pair of light curtains flanking
3 the plunger, the pressure in the chamber being increased when the
4 plunger moves across one of the light curtains and decreased when
5 the plunger moves across the other of the light curtains.

1 4. The autoclaving method defined in claim 2 wherein
2 the pressure is monitored by detecting the distance between the
3 plunger and a fixed sensor.

1 5. The autoclaving method defined in claim 4 wherein
2 the distance is detected optically or by ultrasound.

1 6. The autoclaving method defined in claim 5 wherein
2 the distance is detected optically by means of reflection or the
3 Doppler effect.

1 7. The autoclaving method defined in claim 1 wherein
2 the pressure is monitored by providing a pressure sensor exposed
3 to the fluid in the container.

1 8. An apparatus for autoclaving a container in which a
2 shiftable plunger defines a compartment filled with a fluid, the
3 apparatus comprising:

4 a pressurizable chamber in which the container is
5 confined;

6 pump means for pressurizing the chamber;

7 means for heating the container in the chamber and
8 thereby changing a pressure in the compartment of the container;

9 means including a sensor for monitoring the pressure in
10 the compartment of the container and generating an output
11 corresponding thereto; and

12 control means connected to the sensor and to the pump
13 means for a varying pressure in the chamber around the container
14 so as to be generally equal to the monitored pressure in the
15 compartment of the container.

1 9. The autoclaving apparatus defined in claim 8
2 wherein the sensor monitors movement of the plunger as the
3 container is heated.

1 10. The autoclaving apparatus defined in claim 9
2 wherein the sensor includes a pair of light curtains flanking the
3 plunger, the control means increasing pressure in the chamber
4 when the plunger moves across one of the light curtains and
5 decreasing it when the plunger moves across the other of the
6 light curtains.

1 11. The autoclaving apparatus defined in claim 9
2 wherein the sensor detects the distance between the plunger and a
3 fixed sensor.

1 12. The autoclaving apparatus defined in claim 8
2 wherein the sensor operates optically or by ultrasound.

1 13. The autoclaving apparatus defined in claim 12
2 wherein the sensor operates optically by means of reflection or
3 the Doppler effect.

1 14. The autoclaving apparatus defined in claim 8
2 wherein the sensor is exposed to the fluid in the container.

1 15. The autoclaving apparatus defined in claim 14
2 wherein the container has a wall and the sensor projects through
3 the wall.

1 16. The autoclaving apparatus defined in claim 14
2 wherein the container is a syringe having a tip cap and the
3 sensor projects through the tip cap.